

Claims:

1. A method for testing computing devices, comprising the steps of:

5 in a first phase of operation:

 downloading a test program a first time from a server
for execution by a first computing device coupled thereto;

 executing said test program on said first computing de-
vice to produce program events;

10 recording said program events, and capturing first
screens of said first computing device that are displayed
responsively to said program events while executing said
test program on said first computing device; and

 in a second phase of operation:

15 downloading said test program a second time for execu-
tion by a second computing device;

 replaying said test program on said second computing
device to reproduce said program events;

20 capturing second screens of said second computing de-
vice that are displayed while executing said test program
on said second computing device responsively to said repro-
duced program events; and

 comparing at least one of said first screens to a cor-
responding one of said second screens.

25 2. The method according to claim 1, wherein said second
phase of operation is performed automatically and substantially
without human intervention.

3. The method according to claim 2, wherein said second phase of operation comprises automatically injecting said program events into an event handler.

5 4. The method according to claim 3, wherein said program events are injected into said event handler as executable code.

10 5. The method according to claim 3, wherein said program events are injected into said event handler as a stream of event code for processing by said event handler.

15 6. The method according to claim 1, wherein said steps of replaying, capturing second screens and comparing are performed automatically and substantially without human intervention.

7. The method according to claim 1, wherein said program events comprise a time interval between a current event and another event.

20 8. The method according to claim 1, wherein said program events comprise program actions.

25 9. The method according to claim 1, wherein said program events comprise user actions.

30 10. The method according to claim 1, wherein said steps of downloading said test program a first time and downloading said test program a second time are performed by downloading a JAR file and a JAD file.

11. The method according to claim 1, wherein said second computing device comprises a plurality of second computing devices, and said second phase of operation is performed concurrently on said plurality of second computing devices.

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12. The method according to claim 1, wherein said second computing device and said test program are MIDP compliant.

13. A computer software product, comprising a computer-readable medium in which computer program instructions are stored, which instructions, when read by a computer, cause the computer to perform a method for testing computing devices, comprising the steps of:

in a first phase of operation:

15 downloading a test program a first time from a server for execution by a first computing device coupled thereto;

 executing said test program on said first computing device to produce program events;

20 recording said program events, and capturing first screens of said first computing device that are displayed responsively to said program events while executing said test program on said first computing device; and

in a second phase of operation:

25 downloading said test program a second time for execution by a second computing device;

 replaying said test program on said second computing device to reproduce said program events;

30 capturing second screens of said second computing device that are displayed while executing said test program on said second computing device responsively to said reproduced program events; and

comparing at least one of said first screens to a corresponding one of said second screens.

14. The computer software product according to claim 13,
5 wherein said second phase of operation is performed automatically and substantially without human intervention.

15. The computer software product according to claim 14,
wherein said second phase of operation comprises automatically
10 injecting said program events into an event handler.

16. The computer software product according to claim 15,
wherein said program events are injected into said event handler as executable code.

15 17. The computer software product according to claim 15,
wherein said program events are injected into said event handler as a stream of event code for processing by said event handler.

20 18. The computer software product according to claim 13,
wherein said program events comprise a time interval between a current event and another event.

25 19. The computer software product according to claim 13,
wherein said program events comprise program actions.

20 20. The computer software product according to claim 13,
wherein said program events comprise user actions.

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21. The computer software product according to claim 13, wherein said steps of downloading said test program a first time and downloading said test program a second time are performed by downloading a JAR file and a JAD file.

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22. The computer software product according to claim 13, wherein said second computing device comprises a plurality of second computing devices, and said second phase of operation is performed concurrently on said plurality of second computing devices.

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23. The computer software product according to claim 13, wherein said second computing device and said test program are MIDP compliant.

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24. A system for testing computing devices, comprising:
a server having a test framework executing therein that is adapted for interaction with a plurality of said computing devices that are coupled to said server;

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wherein in a first phase of operation:

a test program is executed by a first computing device coupled thereto to produce program events;

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said server being adapted to record said program events, and to capture first screens of said first computing device that are displayed responsively to said program events; and

wherein in a second phase of operation:

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said test program is executed by a second computing device coupled to said server under control thereof to reproduce said program events, said server being adapted to capture second screens of said second computing device that

are displayed responsively to said reproduced program events, and to compare at least one of said first screens to a corresponding one of said second screens.

5 25. The system according to claim 24, further comprising a workstation coupled to said server, wherein execution of said test program on said first computing device is conducted under control of said workstation.

10 26. The system according to claim 25, wherein said program events comprise user actions that are initiated on said workstation.

15 27. The system according to claim 24, wherein said second phase of operation is performed automatically and substantially without human intervention.

20 28. The system according to claim 27, wherein in said second phase of operation said server is adapted to handle said program events in an event handler and to automatically inject said program events into said event handler.

25 29. The system according to claim 28, wherein said program events are injected into said event handler as executable code.

30. The system according to claim 28, wherein said program events are injected into said event handler as a stream of event code for processing by said event handler.

31. The system according to claim 24, wherein said program events comprise a time interval between a current event and another event.

5 32. The system according to claim 24, wherein said program events comprise program actions.

10 33. The system according to claim 24, wherein said test program is downloaded to said first computing device and said second computing device as a JAR file and a JAD file.

15 34. The system according to claim 24, further comprising a communications bridge linked to said server, wherein said second computing device comprises a plurality of second computing devices that are linked to said server via said communications bridge, and said second phase of operation is performed concurrently on said plurality of second computing devices.

20 35. The system according to claim 24, wherein said second computing device and said test program are MIDP compliant.